

Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) EP 0 873 759 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
02.06.1999 Bulletin 1999/22

(51) Int. Cl.⁶: A61M 25/00

(43) Date of publication A2:
28.10.1998 Bulletin 1998/44

(21) Application number: 98201084.5

(22) Date of filing: 09.04.1998

(84) Designated Contracting States:
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE
Designated Extension States:
AL LT LV MK RO SI

(72) Inventors:
• Samuelson, Christine M.
Plymouth, Minnesota 55447 (US)
• Krieger, Sarah J.
Plymouth, Minnesota 55446 (US)

(30) Priority: 25.04.1997 US 44879 P

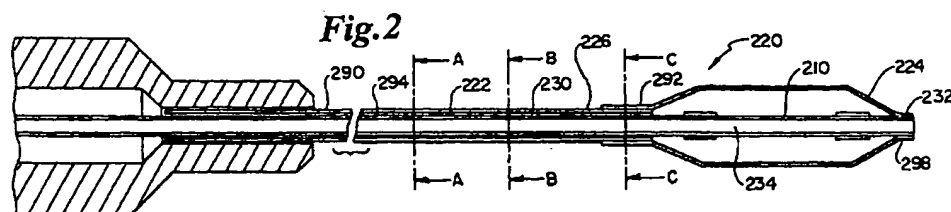
(74) Representative: Jansen, Götz
Schneider (Europe) GmbH,
Ackerstrasse 6
8180 Bülach (CH)

(71) Applicant: SCHNEIDER (USA) INC.
Plymouth, Minnesota 55442 (US)

(54) Tri-layer extruded medical tubing and medical devices incorporating such tubing

(57) The present invention provides a length of tri-layer, extruded, medical tubing (10) comprising an outer layer (16), a core layer (12), and an intermediate tie layer (14). The outer layer (16) comprises a polymer that is directly bondable, while the core layer (12) comprises a lubricious polymer. The core layer (12) thus defines a lumen (15) that exhibits the desired characteristics, i.e., low friction for the advancement of a

guidewire or catheter through the lumen without comprising the strength and stiffness that is desirable in tubing that is to be used in medical devices. Additionally, the tubing (10) is easily coextruded and yet, is not subject to delamination, thus providing the added advantage of providing a reduction in the overall cost of manufacture.



EP 0 873 759 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 20 1084

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	US 5 451 206 A (YOUNG) 19 September 1995 * abstract; figures 3,4 *	1-43	A61M25/00
A	US 4 636 346 A (SMITH ET AL.) 13 January 1987 * abstract; claims 4-7; figures 2,3,6-8 *	1-43	
A	US 5 538 510 A (FONTIRROCHE ET AL.) 23 July 1996 * abstract; claims 1-12; figures 1,2 *	1-43	
A,D	US 5 501 759 A (FORMAN) 26 March 1996		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6) A61M A61L
Place of search THE HAGUE		Date of completion of the search 13 Apr11 1999	Examiner Michels, N
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03/82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 98 20 1084

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

13-04-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5451206 A	19-09-1995	US 5348536 A CA 2128966 A	20-09-1994 03-02-1995
US 4636346 A	13-01-1987	US 4596563 A US 4753765 A	24-06-1986 28-06-1988
US 5538510 A	23-07-1996	CA 2140506 A EP 0669142 A JP 8033705 A US 5824173 A US 5820594 A	01-08-1995 30-08-1995 06-02-1996 20-10-1998 13-10-1998
US 5501759 A	26-03-1996	US 5267959 A AU 659494 B AU 2572992 A CA 2121495 A,C DE 9290143 U EP 0618861 A EP 0839634 A JP 10323393 A JP 2840575 B JP 9182796 A JP 2511643 B JP 6510715 T WO 9310961 A	07-12-1993 18-05-1995 28-06-1993 10-06-1993 28-07-1994 12-10-1994 06-05-1998 08-12-1998 24-12-1998 15-07-1997 03-07-1996 01-12-1994 10-06-1993